

HOW I DO IT

Prevention of Postoperative Bile Leakage After Major Hepatic Resections in Malignancies

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Postoperative bile leakage is a common complication in major liver resections, especially in segmentectomies and in extended left or right hepatectomies [1]. According to our experience since 1985, we apply a simple but smart maneuver to prevent bile leakage from the traumatic surface of the liver. After the end of the liver resection, we insert a fine catheter into the stump of the cystic duct or we puncture the common bile duct (CBD) with a fine needle while a Satinsky clamp occludes the distal portion of the CBD. The next step is to inject the CBD, via the catheter or fine needle, with 15–20 ml of normal saline solution stained with 2 ml of methylene blue. By this retrograde infusion, if there are open intrahepatic bile ductules, the stained solution immediately is ejected from the traumatic surface of the liver. Usually three to five or more such points are discovered in every case. The ductules are dissected and ligated by suturing with fine Prolene (Fig. 1). The procedure can be repeated until no ejection of stained solution is obvious.

The above technique has been applied to 43 consecutive liver resections and we had only 1 case with mild postoperative bile leakage (2.3%). The rate of postoperative bile leakage was reduced from 17% before 1985 to 2.3% after 1985 (1/43 vs. 6/35; $P < 0.0229$). With these results, we believe that this simple and safe operative technique can be applied in any major liver operation in order to control completely postoperative bile leakage.

REFERENCES

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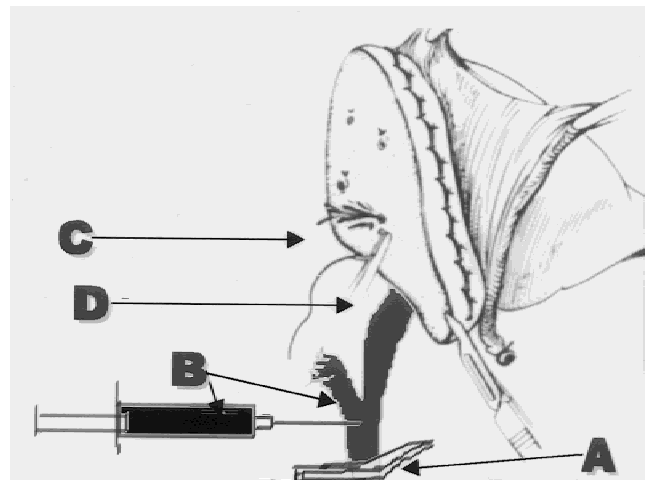


Fig. 1. Schematic representation of right hepatectomy. **A:** A Satinsky clamp occludes the distal common bile duct; **B:** infusion of the stained solution with methylene blue; **C:** ejection of stained solution from the opened bile ductules; **D:** suturing of the bile ductules.

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